

ENVIRONMENTAL IMPACT  
STATEMENT

*VISUAL IMPACT DISCUSSION*

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## **BACKGROUND**

The National Environmental Policy Act (NEPA) requires that consideration be given to determine the effects proposed Federal actions or projects are likely to have on the quality of the human environment. Visual effect is identified as one of the environmental factors which must be considered. It is included in NEPA under the subject "esthetics."

Environmental impact statements (EIS) are required for major Federal actions which significantly affect the environment. The Federal Highway Administration's (FHWA) Technical Advisory T6640.8A (TA) provides guidance on the preparation and processing of environmental documents. It identifies that whenever a potential for visual impacts exists, the EIS should identify the impacts to the existing visual resource, the relationship of the impacts to potential viewers of and from the project, as well as measures to avoid, minimize, or reduce the adverse impacts. This information is intended to serve as a guide for the preparation of a visual impact discussion for an EIS.

## **VISUAL IMPACT DISCUSSION**

The visual impact discussion is a summary of the information, findings, and conclusions generated by the visual impact assessment of the proposed project. Since the nature of the assessment varies depending upon the character of the project, the visual character of the area, viewer sensitivity, and potential impacts, the visual impact discussion will likewise vary. The discussion should clearly explain the character of the visual environment and the visual impacts arising from the project while being commensurate in magnitude with the potential for visual impacts.

Although the visual impact discussion will differ overall from one EIS to another, the general discussion format should be essentially the same. It should be consistent, first of all, with the format requirements of the TA. It must also adequately address the pertinent visual issues that are likely to have an effect on the visual environment. The depth to which information is covered should not alter the discussion format nor its informational content (i.e., a general visual description of the affected area should be discussed irrespective of the project's magnitude).

The discussion of visual issues in the EIS should include:

- o A description of the visual environment
- o Identification of the visual quality of the area
- o Identification of any visually sensitive resources
- o A description of the viewers of and from the highway
- o An explanation of potential visual impacts
- o Measures to mitigate adverse visual impacts

The above issues should be appropriately included in the Affected Environment and Environmental Consequences sections of the EIS. Relevant information should also be appropriately placed in special reports, such as 4(f) Evaluations and Cultural Resource discussions. The guidance information that follows will focus on the content of the visual discussion in the Affected Environment and Environmental Consequences sections of the EIS.

## **AFFECTED ENVIRONMENT**

In accordance with the TA, this section of the EIS should provide, in addition to other information, a description of the existing environmental setting for the area affected by all alternatives presented in the EIS. The discussion is to focus on information which will have a bearing on possible impacts, mitigation measures, and on the selection of an alternative. The visual environment contains resources which form the stimuli upon which visual experience is based. Highway projects often change these resources and alter the visual experience of persons who are viewers in the study areas. A description of the visual environment is necessary to determine and understand the extent of visual changes arising from the project. The discussion should focus on the existing landscape, including any visually sensitive resources, and viewers in the study area.

### **Existing Landscape**

The description of the existing landscape should be addressed with respect to its visual character and visual quality. It is a form of visual inventory that provides identification of what is seen in the affected area's visual environment. The limits of the visual environment are generally established by the highway's viewshed; the surface area visible from the highway and from which the highway can be seen. Where possible, this information should be discussed with relative general focus on the overall project area. However, when the size of the project or the diversity of the landscape warrants, the study area can be separated into smaller identifiable geographic areas (Landscape Units) for explanation purposes. These areas are generally distinguishable by variations in the landscape's visual character.

### ***Existing Visual Character***

The existing landscape visual character discussion should encompass the general components that form the basis of all landscapes.

These landscape components are:

- Landform
- Water
- Vegetation
- Manmade Development

*Landform* - The existing landscape description should identify the underlying landform of the study area. This is information that identifies the topographical features of the area. The discussion should provide a general overview of the entire project area. However, where appropriate, the information can focus on landscape units.

Some of the typical landforms are:

- Mountains
- Steep Hills/Ridges
- Rolling Hills
- Undulating Land
- Level Land/Plains
- Plateaus
- Valleys
- Cliffs, Bluffs
- Points
- Beaches

*Water* - Water resources that are located in the project area should be included in the description of the existing landscape. This would apply whether these resources are affected directly, indirectly, or not at all by the proposed project. The ultimate determination of effect would be clarified by the visual impact discussion in the Environmental Consequences section.

It is important that the descriptive information on water resources identify their type and relative visual importance to the study area. The information should also identify whether the water resources have any associated recreational uses.

Water resources are commonly identified as:

- Rivers
- Streams/Creeks
- Lakes
- Ponds
- Bays/Inlets
- Ocean
- Marshes
- Wetlands
- Waterfalls/Rapids

*Vegetation* - The vegetative elements within the study area must be identified to have a full appreciation of the existing landscape. The type and magnitude of vegetative cover should be included in the descriptive information. It is not uncommon to find a mixture of vegetation

within a study area. In addition to identifying the various types, the information should indicate which vegetation is predominant in the area. Locations that have been designated open or green areas under land use controls should be addressed in this discussion.

Some of the different vegetation types are as follows:

- Coniferous Woods
- Deciduous Woods
- Scrubland
- Grassland
- Pasture
- Parks
- Lawns
- Street Trees
- Agriculture/Croplands

*Manmade Development* - A description of manmade development in the study area should be included in the discussion with identification of any features that might indicate visual sensitivity or give importance to the development. In instances where the proposed project is located in an area having major manmade development, the information should address those areas that are within sight of the project. The information should identify the type, magnitude, and where appropriate, the uses associated with the manmade development.

Some typical manmade development categories are:

Urban Centers	Utility Lines
Industrial Areas	Towers/Structures
Commercial Areas	Docks/Piers
Institutional Areas	Bridges/Dams
Residential Areas	Parking/Storage Yards
Recreational Areas	Embankments/Cuts/Pits
Highways	Canals/Channels
Railroads	Billboards/Signs

### ***Existing Visual Quality***

The visual quality of the affected area should be addressed when discussing the character of the existing landscape. This information will provide a better understanding of the affected area's visual environment and a reference against which the proposed project's visual effects can be evaluated.

The existing landscape is considered to have high visual quality when its landscape components (landform, water, vegetation, manmade development) have striking characteristics that convey visual excellence. It must be recognized that high visual quality is not exclusively associated with natural landscapes, but will also be present in urban area landscapes. The visual quality of an area can be informally determined from knowledge of the viewer's preference or from general observation. A more formal determination can be made utilizing some form of visual assessment methodology. There are instances where the visual quality of some areas are easily recognized. These are locations that have been officially designated scenic areas (i.e., national parks, scenic overlooks, scenic byways, etc.).

### ***Visually Sensitive Resources***

Some landscape components could be visually sensitive due to values that may or may not be related to visual excellence. These could be locations that are visually important for historic, scientific, or recreational reasons. Similarly, certain landscapes and resources may be important only to the local community. When these conditions exist, the affected area discussion should be documented with appropriate information.

### **Viewers**

In order to understand and predict the visual effects of a proposed project, something must be known about the viewers who are likely to see it. The affected environment discussion should provide information that identifies the different viewer groups in the study area.

The highway viewers are identified under two classes: (1) Those with a view from the road and (2) Those with a view of the road. Quantitative information should be provided for each viewer group affected by the proposed project. This information need not be identified numerically but could be identified by other quantifiers (i.e., low, small, moderate, few, medium, high, etc.). Any information provided, must be relative to the overall viewer population. It is also important to identify the time in which a given viewer group is exposed to the proposed project.

The viewer groups are identified as follows:

#### ***Groups with a view from the road***

Tourist traffic  
Local traffic  
Commuter traffic

#### ***Groups with a view of the road***

Residents  
Recreational  
Educational  
Commercial  
Industrial

## **ENVIRONMENTAL CONSEQUENCES**

This section of the EIS should include a discussion of the probable beneficial and adverse visual effects of the different project alternatives and a description of measures proposed to mitigate adverse effects. There should be sufficient information to clarify and support all conclusions concerning impacts. The information should focus on the visual characteristics of the project and their effects on the viewers in the study area including those with views from and views of the highway. This should be accomplished with due consideration being given to changes the project will cause to landscape components in locations that have been noted as visually sensitive.

### **Visually Sensitive Locations**

The information contained in the discussion should identify the visually sensitive locations along each alternate. It should be recognized that the identification of sensitive areas are relative to each proposed project. That is, the visual characteristics of one geographic area should not be compared to another for identification of visually sensitive locations. Each study area has its own characteristics. Locations may be deemed visually sensitive for their visual quality, uniqueness, cultural significance, and/or viewer characteristics. The identification of these locations is particularly important for determining and addressing the effects the proposed project will have on viewers of the highway. It will establish observer viewpoints or locations from which the visual changes generated by the project will be examined to determine their visual impact.

### **Visual Character of Project**

In addition to the above information, the visual impact discussion should describe the characteristics of the proposed project within view of the visually sensitive locations. The information should include an identification of highway construction features and any resulting changes to the existing landscape (i.e., landform, water, vegetation, and manmade development).

This would include, but not be limited to, features such as:

Cut slopes	Noise barriers
Fill slopes	Structures
Pavement surface	Lighting
Retaining walls	Fencing
Curbing	Median barriers
Vegetation clearing	Guardrails

## **Visual Effects**

It should be recognized that the construction of a highway, whether on existing or new alignment, will always cause some degree of visual change in an area. However, the effects of these changes will vary. They can range from beneficial to adverse and can be minor or major. It is, therefore, important that the visual effects of each alternative on the identified sensitive locations be discussed. The information should address the visual changes that will result from the project and their potential effect on the affected viewer groups. The discussion should address any visual qualities the locations may have. The extent of the projects effects on these qualities should be identified whether they are positive or negative.

## **Mitigation**

A discussion of mitigation measures is required if the proposed alternatives will have visual effects on the study area. Mitigation includes the enhancement of positive effects as well as the minimization or elimination of negative effects. The mitigation measures discussion should address the specific visual impacts associated with the project alternatives, including information on the likelihood of their being implemented. The measures should be realistic to ensure their full realization.



## AFFECTED ENVIRONMENT

### Visual

The project area is part of a larger area surrounding Highman which is known for its natural scenic value and visual quality. One landscape unit has been defined within the project area due to uniformity of the topography. This landscape unit is used to describe the existing visual setting and to analyze impacts on that setting. Impacts are discussed in a later Chapter.

Within the study area the landscape unit is a rural valley setting with a prominence of hills and mountains to the side and in the background. The existing road parallels the west side of the South Fork River up the valley, along the toe of the steeper terrain. Flatter lands lie on the valley floor between the road and the river.

Landcover consists of the river itself, and natural vegetation including grasses, brush, and evergreen trees with the predominant species being Ponderosa Pine. There are some pine trees scattered on the north side. Thicker stands lie along both sides of the river and along the slopes south of the river. Manmade development includes the existing road, sparse residential development, and two greenhouses. The river is used on a limited bases for recreational activities.

Highway user views are limited in duration due to the attention required to drive the low-class, curvy road and the lack of pullout areas for viewpoints.

## ENVIRONMENTAL CONSEQUENCES

### Visual

Probable visual effects are evaluated by alternative below:

Impacts:

#### Alternative 1

The No-Build Alternative would not directly alter any visual resources. Future traffic increases will, however, make it more difficult for drivers to enjoy the view from the highway.

#### Alternative 2

Upgrading generally within the existing alignment would almost double the roadway width and create larger cut and fill slopes, increasing the visual scale of the roadway. Existing roadside vegetation would be lost, consisting mostly of grass and brush, and a few trees. This would have a low adverse effect upon the quality of views from the highway. The view of the road by a low number of permanent residents would have a low adverse effect, as well as short duration views by some water recreationists.

Beneficial effects would result from improved continuity and enhanced visibility by providing a smooth flowing curvilinear alignment of horizontal and vertical curves designed to blend with the landscape. Minor adjustments in alignment can help preserve visual resources.

#### Alternative 2, High Option

Impacts associated with this option are identical to Alternative 2 except at one location where the alignment would be located north of one residence with a viewshed important to the occupant. There would be a moderate beneficial effect to the resident relating to the view of the road. A corresponding moderate adverse effect results from removing 60,000 cubic yards of additional excavation leaving an expansive cut slope. This adverse effect will be very short duration for the motorist, and long-term for the few neighboring residents.

#### Alternative 3

This alternative on new location creates a new roadway corridor in the rural landscape. The highway itself can be designed to create a pleasing visual experience for the driver. However, some visual resources will be affected including water resources at two crossings of the South Fork River, bluffs, hillsides and forest vegetation involving considerable numbers of pine trees. These resource impacts adversely effect the visual quality of the permanent residents who will be able to view the completed highway and will have short-term impacts for the water recreationists.

Mitigation - The visual quality of the adversely effected areas will be improved by:

- o Curvilinear design to blend with the landscape.
- o Landscape planting and natural revegetation of the cut and fill slopes.
- o Structural design (drainage structures, bridges, guardrail etc.) consideration to enhance visual appearance (Alternative 3).